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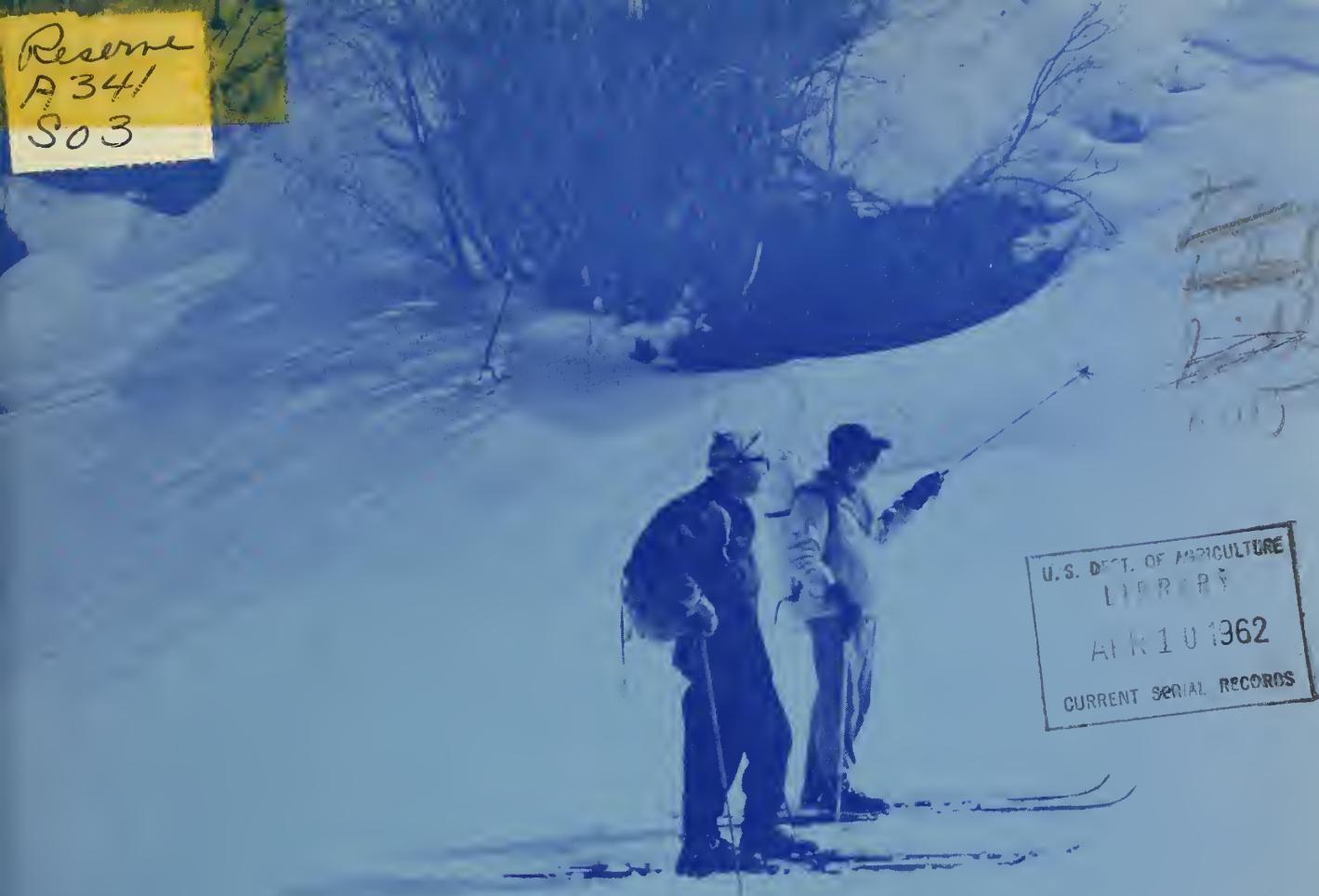












FEDERAL - STATE - PRIVATE  
COOPERATIVE  
**SNOW SURVEY and WATER SUPPLY FORECASTS  
for  
WYOMING**

UNITED STATES DEPARTMENT of AGRICULTURE--SOIL CONSERVATION SERVICE,  
and  
STATE ENGINEER of WYOMING

Data included in this report were obtained by the agencies  
named above in cooperation with the Bureau of Reclamation,  
U.S. Forest Service, National Park Service, and other Federal,  
State and private organizations.

AS OF  
MAR. 1, 1961

# UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

To Recipients of Cooperative Snow Survey and Water Supply Forecast Reports:

The climate of the cultivated and populated areas of the West is characterized by relatively dry summer months. Such precipitation as occurs falls mostly in the winter and early spring months when it is of little immediate benefit to growing crops. Fortunately, most of this precipitation falls as mountain snow which stays on the ground for months, melting later to sustain streamflow during the period of greatest demand during late spring and summer. Thus, nature provides in mountain snow an imposing water storage facility.

The amount of water stored in mountain snow varies from place to place as well as from year to year and accordingly, so does the runoff of the streams. The best seasonal management of variable western water supplies results from fore-knowledge of the runoff.

A snow survey consists of a series of about ten samples taken with specially designed snow sampling equipment along a permanently marked line, about 1000 feet in length, called a snow course. The use of snow sampling equipment provides snow depth and water equivalent values for each sampling point. The average of these values is reported as the snow survey measurement for a snow course.

Snow surveys are made monthly or semi-monthly beginning in January or February and continue through the snow season until April, May or June. Currently more than 1400 western snow courses are measured each year. These measurements furnish the key data for water supply forecasts.

By relating snow survey measurements taken over a period of years to spring-summer runoff during the same period, relationships have been developed which make it possible to forecast seasonal runoff several months in advance of occurrence. In order to make a forecast, once a forecast relationship has been developed, the maximum snow water content at previously selected key snow courses is usually entered in the forecast relationship. More accurate forecasts are often obtained when other factors such as soil moisture, base flow and spring precipitation are considered and included in the forecast relationships.

Listed below are the Federal-State-Private Cooperative Snow Survey and Water Supply Forecast reports available for the West which contain detailed information on snow survey measurements, streamflow forecasts, reservoir storage, soil moisture and other guide data to water management and conservation decisions.

## PUBLISHED BY SOIL CONSERVATION SERVICE

<u>REPORTS</u>	<u>ISSUED</u>	<u>LOCATION</u>	<u>COOPERATING WITH</u>
<b>RIVER BASINS</b>			
COLORADO AND STATE OF UTAH — MONTHLY (JAN.-MAY) — SALT LAKE CITY, UTAH — UTAH STATE ENGINEER AND OTHER AGENCIES			
COLUMBIA	MONTHLY (JAN.-MAY)	BOISE, IDAHO	IDAHO STATE RECLAMATION ENGINEER
UPPER MISSOURI AND STATE	MONTHLY (FEB.-MAY)	BOZEMAN MONTANA	MONT. AGR. EXP. STATION
WEST-WIDE	OCT. 1, APR. 1, MAY 1	PORTLAND, OREGON	ALL COOPERATORS
<b>STATES</b>			
ALASKA	MONTHLY (MAR.-MAY)	PALMER, ALASKA	ALASKA S.C.D.
ARIZONA	SEMI-MONTHLY (JAN. 15 - APR. 1)	PHOENIX, ARIZONA	SALT R. VALLEY WATER USERS ASSOC. ARIZ. AGR. EXP. STATION
COLORADO AND NEW MEXICO	MONTHLY (FEB.-MAY)	FORT COLLINS, COLORADO	COLO. AGR. EXP. STATION COLO. STATE ENGINEER N. MEX. STATE ENGINEER
IDAHO	MONTHLY (FEB.-MAY)	BOISE, IDAHO	IDAHO STATE RECLAMATION ENGINEER
NEVADA	MONTHLY (FEB.-APR.)	RENO, NEVADA	NEVADA DEPT. OF CONSERVATION AND NATURAL RESOURCES DIVISION OF WATER RESOURCES
OREGON	MONTHLY (JAN.-MAY)	PORTLAND, OREGON	ORE. AGR. EXP. STATION OREGON STATE ENGINEER
WASHINGTON	MONTHLY (FEB.-MAY)	SPOKANE, WASHINGTON	WN. STATE DEPT. OF CONSERVATION
WYOMING	MONTHLY (FEB. JUNE)	CASPER, WYOMING	WYOMING STATE ENGINEER

Copies of these various reports may be secured from: Head, Water Supply Forecasting Section  
Soil Conservation Service,  
209 S. W. Fifth Ave., Portland 4, Oregon

## PUBLISHED BY OTHER AGENCIES

<u>REPORTS</u>	<u>ISSUED</u>	<u>AGENCY</u>
BRITISH COLUMBIA	MONTHLY (FEB.-JUNE)	COMPTROLLER, WATER RIGHTS BR., DEPT. OF LANDS AND FORESTS, PARLIAMENT BLDG., VICTORIA, B.C., CANADA
CALIFORNIA	MONTHLY (FEB.-MAY)	CALIF. DEPT. OF WATER RESOURCES, SACRAMENTO, CALIF.

FEDERAL-STATE COOPERATIVE  
SNOW SURVEYS AND WATER FORECASTS

FOR

WYOMING

Issued  
March 1, 1961

Report Prepared  
by  
George W. Peak  
Snow Survey Supervisor  
State of Wyoming

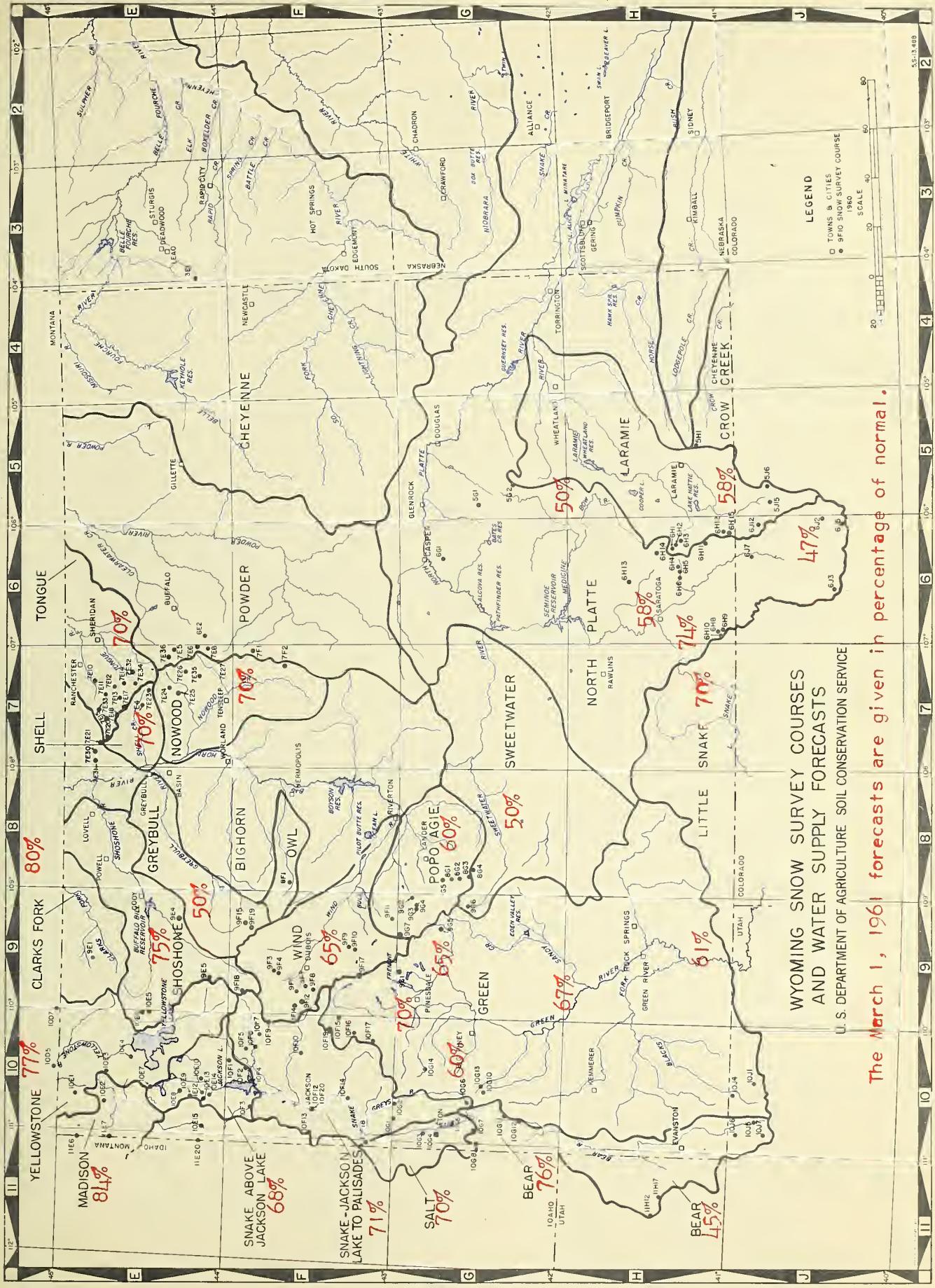
Soil Conservation Service  
345 East 2nd Street  
P. O. Box 699  
Casper, Wyoming

Issued by

B. H. Hopkins  
State Conservationist  
Soil Conservation Service

Earl Lloyd  
State Engineer of Wyoming  
Cheyenne, Wyoming





**INDEX TO WYOMING SNOW COURSES**

LOCATION														LOCATION													
DRainage Basin And Course Name	Wyoming Number	Elev.	Sec. Lat.	Twp.	Range Long.	Record Began	Meas. Dates a	Meas. By b	DRainage Basin And Course Name	Wyoming Number	Elev.	Sec. Lat.	Twp.	Range Long.	Record Began	Meas. Dates a	Meas. By b										
MISSOURI RIVER DRAINAGE														MISSOURI RIVER DRAINAGE													
MADISON RIVER									CROW CREEK																		
Norris Basin	10E2	7500	44°44'		110°42'	1936	2,3,4,5	2	Pole Mountain #2	5H1	8700	35	15N	72W	1936	2,3,4,5	1										
21 Mile -m	11E6	7150	1	11S	5E	1934	1,2,3,4,5	6	Albany	6H11	9400	18	14N	78W	1949	2,3,4,5											
West Yellowstone -m	11E7	6700	34	13S	5E	1934	1,2,3,4,5	6	Bottle Creek	6H6	8200	24	14N	85W	1936	2,3,4,5											
YELLOWSTONE									Boxelder	5G1	9000	31	30N	75W	1950	2,3,4,5											
Canyon	10E3	7750	44°44'		110°30'	1938	1,2,3,4,5	1	Casper Mountain	6G1	8700	16	32N	79W	1954	1,2,3,4,5											
Cooke City -m	1007	7400	25	9S	14E	1937	1,2,3,4,5	2	Columbine +c	6J3	3900	21	5N	82W	1936	2,3,4,5											
Crevice Mountain -m	1005	8400	22	9S	9E	1935	3,4		Elk Mountain	6H13	10000	8	19N	81W		2,3,4											
East Entrance	10E6	7000	17	52N	109W	1948	1,2,3,4,5	2	Fox Park	6H12	9200	21	13N	78W	1936	2,3,4,5	4										
Lake Camp	10E4	7650	44°34'		110°24'	1937	1,2,3,4,5	1	LaBonte	5G2	8450	11	27N	74W	1949	2,3,4,5											
Lupine Creek	10E1	7300	44°54'		110°37'	1938	1,2,3,4,5	2	North Barrett Creek #2	6H5	9400	30	16N	80W	1936	2,3,4,5											
Thumb Olived	10E7	7900	44°22'		110°35'	1946	2,3,4	5	North French Creek #1	6H4	10200	27	16N	80W	1938	2,3,4,5											
Sylvan Pass	10E5	7100	12	52N	110W	1936	1,2,3,4,5	2	Northgate +c	6J7	8500	7	11N	79W	1950	2,3,4,5											
CLARK'S FORK									Old Battle	6H10	9800	29	14N	85W	1936	2,3,4,5											
Lodgepole	9E1	8200	32	56N	106W	1940	2,3,4,5	1,4	Park View +c	6J2	9200	24	5N	76W	1936	2,3,4,5											
WIND RIVER									Rock Creek	6H14	9800	5	17N	79W	1960	2,3,4											
Big Warm	9F12	8800	36	42N	109W	1955	2,3,4,5	1	Ryan Park #2	6H6	8400	34	16N	81W	1936	2,3,4,5											
Burroughs Creek	9F4	8800	15	43N	107W	1942	2,3,4,5	1	Weber Spring	6H9	9000	27	14N	85W	1936	2,3,4,5											
Dinwoodie	9F10	10000	9	36N	105W	1948	2,3,4,5	1,3	Willow Creek Pass +c	6J5	9500	1	4N	78W	1938	2,3,4,5											
Oinwoodie Glaciers	9F17	10500	43°14'		109°35'	1959	2,3,4		CHEYENNE RIVER																		
Ory Creek	9F9	9500	34	4N	105W	1948	2,3,4,5	1,3	Upper Spearfish +s	3E1	6500	21	3N	1E	1944	2,3,4	4										
OhuNoir	9F6	8750	27	42N	108W	1940	2,3,4,5	1	GREEN RIVER																		
Geyser Creek	9F7	8500	12	41N	108W	1948	2,3,4,5	1	Big Park	10G11	8700	7	27N	117W	1951	2,3,4,5											
Little Warm	9F8	9500	24	41N	108W	1942	2,3,4,5	1	Blind Bull	10G2	8750	6	34N	115W	1948	2,3,4											
Sheridan R.S. #2	9F14	7500	3	42N	109W	1955	2,3,4,5	1	Outch John R.S.	9G5	8700	32	31N	104W	1936	2,3,4,5											
T-Cross Ranch	9F3	8000	1	43N	107W	1940	2,3,4,5	1	East Rim Divide	10F17	7950	32	37N	111W	1936	1,2,3,4,5											
Togwotee Pass	10F9	9600	29	44N	110W	1936	2,3,4,5	5	Gros Ventre	10F19	8750	36	40N	111W	1948	2,3,4,5											
POPO AGIE RIVER									Hewinta R.S. +u	10J4	9500	33	3N	13E	1930	4											
Blue Ridge	8G2	9600	23	3IN	101W	1939	2,3,4,5	1	Hole-in-the-Rock +u	10J1	9150	13	2N	15E	1931	4											
Bruce's Camp	8G5	6500	24	32N	101W	1955	2,3,4		Kelly R.S.	10G12	8200	13	26N	116W	1951	2,3,4,5											
Hobbs Park	9G3	10000	22	25	3W	1948	2,3,4,5	1,3	Kendall R.S.	10F15	7900	23	38N	110W	1936	2,3,4,5											
Mosquito Park R.S.	9G4	9500	23	25	3W	1940	2,3,4,5	1,3	Loomis Park	10F16	8500	14	37N	111W	1936	2,3,4,5											
Sawmill Glade	8G1	8500	3	31N	101W	1939	2,3,4,5	1	Mulligan Park	9G1	8900	17	35N	106W	1936	2,3,4,5											
South Pass	8G3	9000	13	30N	101W	1939	2,3,4,5	1	Old Battle	6H10	9800	29	14N	85W	1936	2,3,4,5											
St. Lawrence R.S.	9F11	9000	26	1N	4W	1940	2,3,4,5	1,3	Piney-LaBarge	10G10	8200	19	29N	114W	1937	2,3,4,5											
Trout Creek	9G2	8400	5	25	2W	1948	2,3,4,5	1,3	Poison Meadows	10G6	8500	23	30N	116W	1948	2,3,4,5											
Twenty Lakes	9G7	10500	2	1S	5W	1959	2,3,4	1	Snyder Basin R.S. #2	10G13	8040	15	29N	114W	1956	2,3,4,5											
OWL CREEK									Soda Lake	10G14	8300	14	33N	115W	1955	2,3,4,5											
Owl Creek	8F1	8700	36	43N	101W	1948	2,3,4,5	1	COLORADO RIVER DRAINAGE																		
GREYBULL RIVER									GREEN RIVER																		
Kirwin	9F19	11000	13	45N	104W	1960	2,3,4		Big Park	10G11	8700	7	27N	117W	1951	2,3,4,5											
Wood River #2	9F15	8000	28	46N	103W	1956	2,3,4,5	1	Blind Bull	10G2	8750	6	34N	115W	1948	2,3,4											
SHOSHONE RIVER									Outch John R.S.	9G5	8700	32	31N	104W	1936	2,3,4,5											
Carter Mountain	9E4	7800	15	50N	103W	1957	1,2,3,4	1	East Rim Divide	10F17	7950	32	37N	111W	1936	1,2,3,4,5											
East Entrance	10E6	7000	17	52N	109W	1948	1,2,3,4,5	2	Gros Ventre	10F19	8750	36	40N	111W	1948	2,3,4	2										
Ishawooa Cone	9E5	9200	44°13'		109°47'	1960	2,3,4		Glade Creek	10E13	7200	44°08'	109°44'	1919	2,3,4	5											
Sylvan Pass	10E5	7100	12	52N	110W	1936	1,2,3,4,5	2	Grassy Lake	10E15	7265	6	48N	117W	1940	2,3,4,5	5										
Younts Peak	9F18	8500	43°56'		109°49'	1960	2,3,4	1	Huckleberry Divide	10E14	7300	32	48N	115W	1919	2,3,4	5										
NOWOOD CREEK									Lewis Lake Divide	10E9	7900	44°13'	109°40'	1919	2,3,4,5	5											
Cold Springs Camp	7E25	8700	1	50N	88W	1956	2,3,4,5	1	Moran	10F4	6200	8,17	45N	114W	1919	2,3,4	5										
Medicine Lodge Lakes	7E24	9500	7	51N	87W	1956	2,3,4,5	1	Moran Bay	10F3	6800	14	45N	116W	1919	2,3,4	5										
Munkres Pass	7E8	9700	11	49N	85W	1950	2,3,4,5	1	Snake River Station	10E12	6780	44°08'	109°40'	1919	2,3,4	5											
Union Gulch	7E27	8100	31	49N	85W	1956	2,3,4,5	1	Thick Creek	10E7	7900	44°22'	109°35'	1951	2,3,4	5											
Tensleep Lake	7E26	9075	33	50N	86W	1956	2,3,4,5	1	JACKSON LAKE TO PALISADES																		
Tyrell R.S.	7E35	8300	30	49N	86W	1956	2,3,4,5	1	Afton R.S.	10G4	6200	30	32N	118W	1936	1,2,3,4,5	4										
Bear Trap	7F1	8000	10	45N	85W	1960	2,3,4,5	1	Black Rock	10F7	8600	4	44N	111W	1936	2,3,4	5										
Canyon Creek	7F2	7400	16	43N	86W	1960	2,3,4,5	1	Blind Bull	10G2	8750	6	34N	115W	1948	2,3,4	1										
Clouds Peak	7E36	10000	15	51N	85W	1960	2,3,4	1	Bryan Flat	10F14	6250	9	38N	115W	1936	1,2,3,4,5	1										
Muddy Creek G.S.	6E2	7800	2	48N	84W	1956	2,3,4,5	1	CCC Camp	10G7	7500	9	29N	118W	1936	1,2,3,4,5	1,4										
Munkres Pass	7E8	9700	11	48N	85W	1950	2,3,4,5	1	Four Mile Meadows	10F6	7700	35	45N	112W	1936	2,3,4,5	5										
Onion Gulch	7E27	8100	31	48N	85W	1956	2,3,4,5	1	Greys Boundary	10F18	5600	33	37N	118W	1936	1,2,3,4,5	1,4										
Soldier Park	7E5	8700	36	51N	85W	1950	2,3,4,5	1	Gros Ventre	10F19	8750	36	40N	111W	1948	2,3,4,5	1										
Sour Dough	7E6	8500	17	49N	84W	1956	2,3,4,5	1	Grover Park Divide	10G3	7500	27	33N	118W	1936	1,2,3,4,5	1,4										
SWEETWATER									Loomis Park	10F16	8650	14	37N	111W	1936	2,3,4,5	1										
Grannier Meadows #1	8G4	9000	19	30N	100W	1937	2,3,4,5	1	Poison Meadows	10G6	8500	29	30N	116W	1949	2,3,4,5	1										
Larsen Creek	9G6	9000	12	30N	103W	1949	2,3,4,5	1	Yellowjacket	10F10	7675	33	42N	112W	1936	2,3,4,5	4										
South Pass	8G3	900C	13	30N	101W	1939	2,3,4,5	1	Salt River Summit	10G8	7900	32	29N	118W	1948	1,2,3,4,5	1,4										
LARAMIE RIVER									Snow King Mountain #2	10F12	7000	4	40N	117W	1954	Semi. Mo.											
Brooklyn Lake #1	6H1	10200	11	16N	79W	1936	2,3,4,5	1	Snow King Mountain #3	10F20	7600	4	40N	117W	1959	Semi. Mo.											
Brooklyn Lake #2	6H13	10200	11	16N	79W	1956	2,3,4,5	1	BEAR RIVER																		
Deadman Hill +c	5J6	10200	26	16N	75W	1937	3,4,5		Big Park	10G11	8700	7	27N	117W	1951	2,3,4,5											
Evans	6H15	9000	4	12N	76W	1960	2,3,4,5	1	CC Camp	10G7	7500	9	29N	118W	1936	2,3,4,5											
Fox Park	6H12	9200	21	13N	76W	1936	2,3,4,5	4	Girl Hollow +u	10H17	8400	5	7N	5E	1951	3,4,5											
Hairpin Turn #2	6H2	9500	24	16N	76W	1936	2,3,4,5	1	Goodman Ranch +u	10E6	7900	19	3N	10E	1937	4											
Libby Lodge #2	6H3	8700	29	16N	76W	1936	2,3,4,5	1	Hayden Fork +u	10J7	9300	1	1S	9E	1951	4,5	</										

PRELIMINARY WATER SUPPLY OUTLOOK  
FOR  
WYOMING

MARCH 1, 1961

The Snake River Basin above Moran, Wyoming, contains a snow pack that will release 630,000 acre feet into Jackson Lake. This is 68 percent of the average yield. Jackson Lake contents are 242,000 acre feet, or 42 percent of average March 1 storage.

The anticipated flow of the Snake River into Palisades is 70 percent, or 2,250,000 acre feet of water.

The Salt River snow pack is also holding a 70 percent of the average runoff.

Watershed storage on the Green River above Warren Bridge is 245,000 acre feet--again 70 percent.

New Fork Creek is expected to discharge 65 percent of normal and North Piney 60 percent. The Green at Linwood, Utah is forecast at 61 percent, or 800,000 acre feet of water.

The Madison River at West Yellowstone and the Yellowstone River at Corwin are forecast at 84 percent and 77 percent respectively.

Snow surveys on the Wind River drainage above Dubois indicates a runoff of 72,000 acre feet, or 65 percent of average and the Popo Agie snow storage is down to 60 percent. Boysen Reservoir contents are 22 percent of the average March 1 storage. Buffalo Bill Reservoir contains 130,000 acre feet, 56 percent and expects an inflow of 77,000 which is 70 percent of normal.

The anticipated flow of the North Platte at Northgate is 48 percent. The Encampment River watershed will release 74 percent, and at Saratoga, the North Platte runoff will be 58 percent of average, or 385,000 acre feet of water. North Platte storage in Wyoming is 48 percent of the Average March 1 reservoir contents and 22 percent of capacity.



## WYOMING STREAM-FLOW FORECASTS MARCH 1, 1961

Basin and Tributary	April 1 - September 30			
	Seasonal Forecast	Stream-Flow in Thousands of Acre Feet	Measured Runoff	15-year Average
	Runoff	Percent 15-Year Average	1959	1943-57
MADISON RIVER				
West Yellowstone (at)	182	84 %	192	216
YELLOWSTONE RIVER				
Corwin (at)	1518	77 %	1785	1980
NORTH POPO AGIE				
Milford (near)	52	60 %	55	86*
LITTLE POPO AGIE				
Lander (near)	30	60 %	25	49*
WIND RIVER				
Dubois (at)	72	65 %	88	110*
SHOSHONE RIVER				
Buffalo Bill Dam (below)(1)	77	70 %	397	851
CLARKS FORK				
Chance, Mont. (at)	495	80 %	648	617
LARAMIE RIVER				
Jelm (at) (2)	65	58 %	84	113
ENCAMPMENT RIVER				
Encampment (near)	115	74 %	79	156
NORTH PLATTE RIVER				
Northgate (at)	120	67 %	190	255
Saratoga (at)	385	58 %	444	661
MEDICINE BOW RIVER				
Hanna (near)	50	50 %	50	99
SWEETWATER RIVER				
Alcova (near)	42	50 %	17	84
GREEN RIVER				
Warren Bridge (at)	245	70 %	310	348



WYOMING STREAM-FLOW FORECASTS MARCH 1, 1961

Basin and Tributary	April 1 - September 30			
	Seasonal Stream-Flow in Thousands of Acre Feet			
	Forecast Runoff	Percent 15-Year Average	Measurec Runoff 1959	15-Year Average 1943-57
NORTH PINEY CREEK				
Mason (near)	25	60 %	32	41
NEW FORK CREEK				
Boulder (near)	170	65 %	201	260
GREEN RIVER				
Fontenelle (at)	670	67 %	704	995
Linwood (at)	800	61 %	868	1302
SNAKE RIVER				
Moran (at) (3)	631	68 %	680	928
Above reservoir Alpine (near)	2250	71 %	2217	3161
PACIFIC CREEK				
Moran (near)	135	73 %	160	185*
BUFFALO FORK				
Moran (near)	245	73 %	372	337*
GROS VENTRE				
Kelly (at)	205	70 %	N.R.	291*
HOBACK				
Jackson (near)	310	70 %	N.R.	442*
SALT RIVER				
Etna above reservoir(near)	250	70 %	255	360
BEAR RIVER				
Wyo-Utah State Line (near)	55	45 %	100	123*
Harrer (at) Idaho	135	45 %	124	299
SMITH FORK				
Border (near)	90	76 %	80	119

All stream data taken from observed flow records with the following exceptions:

(1) Observed flow corrected for storage in Buffalo Bill Reservoir and Heart Mountain diversion.

(2) Observed flow corrected for Colorado diversion above station.

(3) Observed flow corrected for Jackson Lake Storage.

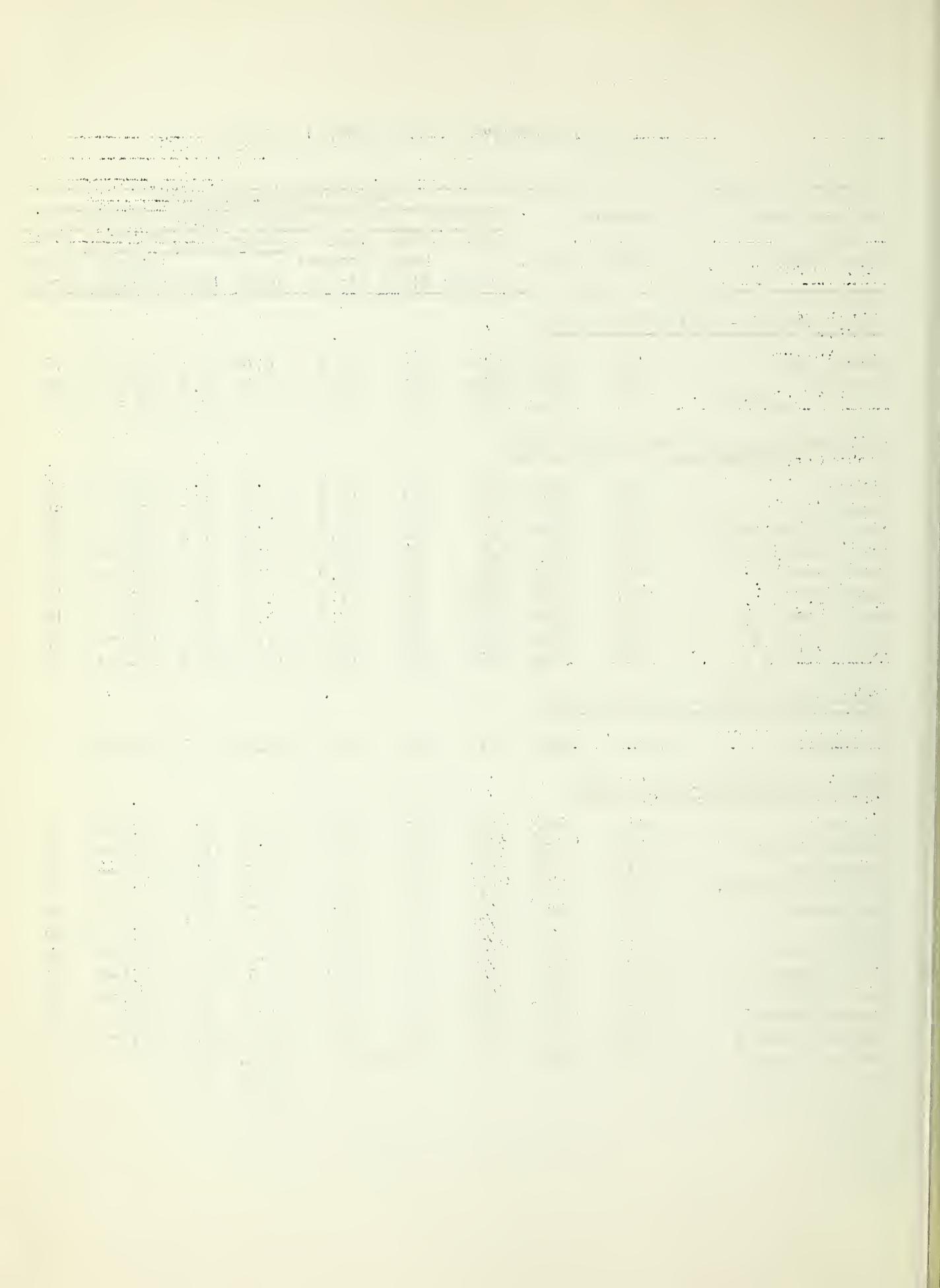
\* Less than 15 years.

\*\* Estimated 1943-57 average.



WYOMING SNOW SURVEYS - ABOUT MARCH 1, 1961

Drainage Basin and Snow Course	Number or State	Elev. of Survey	SNOW COVER MEASUREMENTS						Prior Yrs.of Record	
			1961		PAST RECORD		Water Content (In.)	1943-57		
			Date of Survey	Snow Depth (In.)	Water Content (In.)	1960	1959	Average		
<u>MADISON RIVER - YELLOWSTONE PARK</u>										
Norris Basin $\div$	10E2	7500	2/28	31	7.5	4.0	9.1	8.6*	18	
21 Mile <sup>m</sup>	11E6	7150	2/27	47	12.3	7.8	14.3	16.0	24	
West Yellowstone <sup>m</sup>	11E7	6700	2/27	33	7.5	5.2	8.2	13.3	27	
<u>UPPER YELLOWSTONE - YELLOWSTONE PARK</u>										
Canyon	10E3	7750	3/1	44	10.1	7.4	12.7	12.7*	22	
Cooke City <sup>m</sup>	10D7	7400	3/1	26	5.5	4.2	7.5	7.8	24	
Crevice Mountain <sup>m</sup>	10D5	8400	3/1	22	4.8	4.4	7.5	8.2	22	
East Entrance $\div$	10E6	7000	3/1	33	7.5	5.3	11.4	10.8**	12	
Lake Camp #1	10E4	7850	3/1	34	6.8	4.8	8.1	9.3*	23	
Lupine Creek	10E1	7300	2/28	31	7.5	5.6	9.5	9.7*	21	
Norris Basin $\div$	10E2	7500	2/28	34	7.5	4.0	9.1	8.6*	18	
Sylvan Pass $\div$	10E5	7100	3/1	43	9.5	7.6	14.1	13.1*	17	
Thumb Divide $\div$	10E7	7900	2/25	54	13.5	10.3	16.7	21.2**	10	
<u>LOWER YELLOWSTONE - CLARK'S FORK</u>										
Lodgepole	9E1	8200	3/1	27	5.8	5.0	9.9	9.0**	5	
<u>LOWER YELLOWSTONE - WIND RIVER</u>										
Big Warm	9F12	8800	2/24	22	4.7	5.0	8.1	6.8**	6	
Burroughs Creek	9F11	8800	2/26	31	7.0	6.0	13.3	12.8**	12	
Dinwoodie	9F10	10000	2/27	29	6.1	8.0	9.7	10.6**	12	
Dinwoodie Glaciers	9F17	10500	3/1	30	6.0E	N.R.	9.7	-	1	
Dry Creek	9F9	9500	2/27	17	3.1	3.7	5.7	5.6**	12	
DuNoir	9F6	8750	2/24	17	3.0	4.1	6.7	7.8	20	
Geyser Creek	9F7	8500	2/25	17	3.2	4.0	6.0	6.8**	12	
Little Warm	9F8	9500	2/25	43	9.5	10.7	14.1	14.4**	12	
Sheridan R.S. #2	9F14	7500	2/23	18	2.2	3.7	5.8	5.7**	6	
T-Cross Ranch	9F3	8000	2/26	17	3.3	3.1	6.0	6.8	20	
Togwotee Pass $\div$	10F9	9600	2/27	67	19.0	19.1	26.8	25.7**	11	
Twenty Lakes $\div$	9G7	10500		NO REPORT		N.R.	5.3	-	1	



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			Date of Survey	Snow Depth	Water Content	Water Content (In.)	1943-57	Prior Yrs. of		
				(In.)	(In.)		1960	1959 Average Record		

LOWER YELLOWSTONE - POPO AGIE RIVER

Blue Ridge	8G2	9500	2/20	22	4.2	5.3	5.8	11.2*	21
Bruce's Camp	8G5	6500	2/22	15	2.8	2.9	3.2		3
Hobbs Park	9G3	10000	3/1	40	10.6	11.3	11.3	15.4**	12
Mosquito Park R.S.	9GL4	9500	3/1	22	4.3	5.8	4.8	7.1*	17
Sawmill Glade	8G1	8500	2/21	22	4.3	4.7	5.1	6.9	21
South Pass $\frac{1}{2}$	8G3	9000	2/20	26	5.7	7.1	8.4	13.2	21
St. Lawrence R.S.	9F11	9000	2/28	16	3.3	3.8	4.6	6.1*	17
Trout Creek	9G2	8400	3/1	22	4.4	5.6	4.4	5.1**	12
Twenty Lakes $\frac{1}{2}$	9G7	10500		No Report		N.R.	5.3		1

LOWER YELLOWSTONE - OWL CREEK

Kirwin $\frac{1}{2}$	9F19	11000	3/1	25	5.5E	6.0E			1
Owl Creek	8F1	8700	2/23	28	5.7	6.9	5.0	4.8**	12

LOWER YELLOWSTONE - GREYBULL RIVER

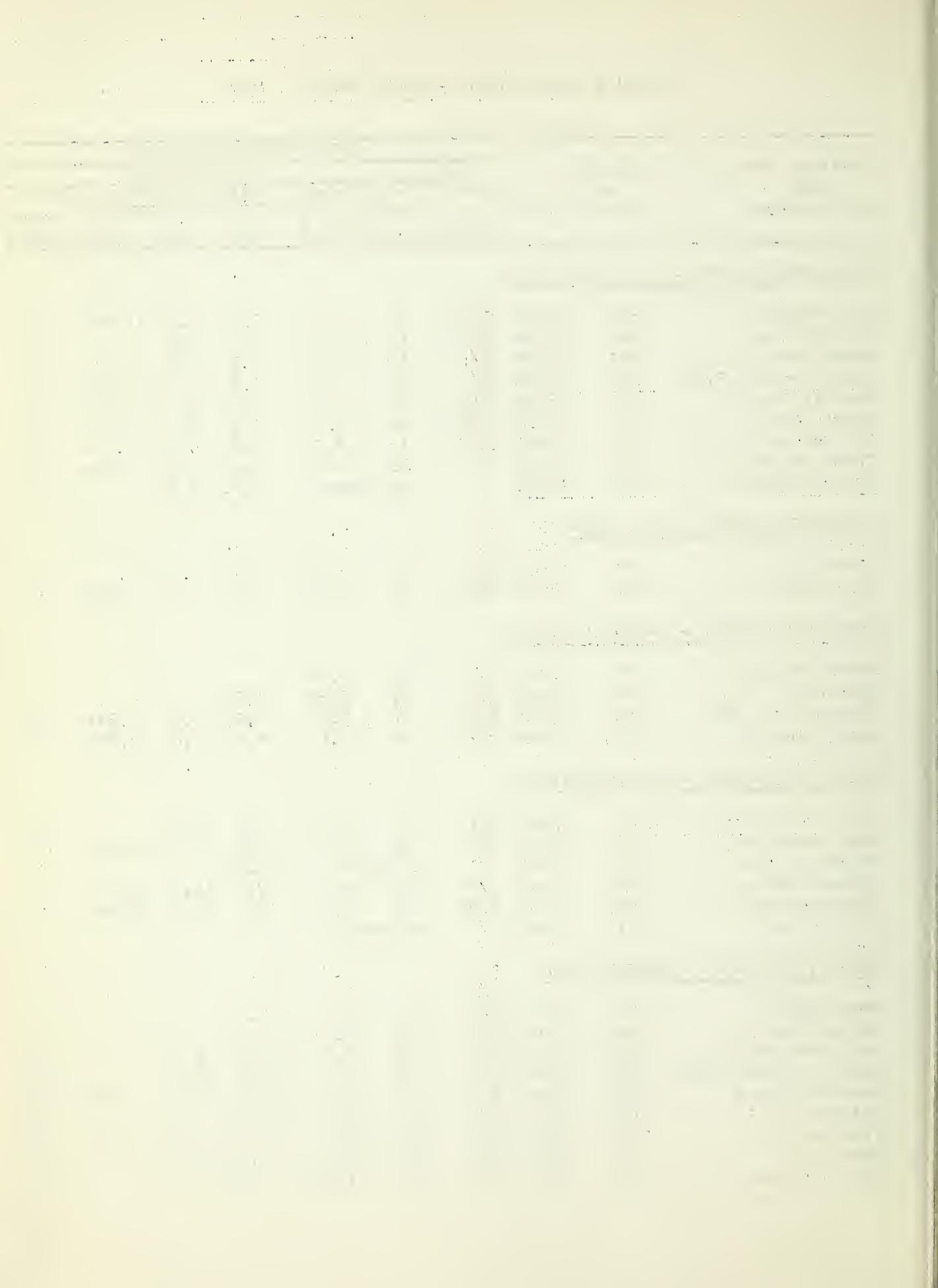
Frontier Needle	9E6	10000	3/4	24	5.5E				
Kirwin $\frac{1}{2}$	9F19	11000	3/4	25	5.5E	6.0E			1
Timber Creek #2	9E3	8800	2/28	11	2.2	N.R.	2.8	2.5**	6
Wood River #2	9F15	8000	2/27	19	4.4	N.R.	4.6	4.0**	6

LOWER YELLOWSTONE - SHOSHONE RIVER

Carter Mountain	9E4	7800	3/1	13	3.2	4.2	3.4		4
East Entrance $\frac{1}{2}$	10E6	7000	3/1	33	7.5	5.3	11.4	10.8**	12
Ishawooa Cone	9E5	9200		No Report		24.0E			1
Sylvan Pass $\frac{1}{2}$	10E5	7100	3/1	43	9.5	7.6	14.1	13.1*	17
Togwotee Pass	10F9	9600	2/27	67	19.0	19.1	26.8	25.7**	11
Younts Peak	9F18	8500		No Report					

LOWER YELLOWSTONE - NOWCOD CREEK

Bear Trap $\frac{1}{2}$	7F1	8000	3/2	29	6.7	4.1			1
Canyon Creek $\frac{1}{2}$	7F2	7400	3/3	36	9.3	8.7			1
Cold Springs Camp	7E25	8700	2/24	22	4.8	4.9	8.8		4
Medicine Lodge Lakes	7E24	9500	2/24	30	7.6	8.0	10.9		4
Munkres Pass $\frac{1}{2}$	7E8	9700	3/1	26	5.5	6.8	7.2	7.5**	6
Onion Gulch $\frac{1}{2}$	7E27	8100	3/2	27	5.2	5.2	9.5		4
Tensleep R.S.	7E7	8300	3/2	29	5.6	N.R.	8.2	6.1**	6
Tyrell R.S.	7E35	8300	3/2	28	5.1	N.R.	8.8		3
West Tensleep	7E26	9075	2/27	36	8.0E	9.5E	11.2		4



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			Snow Depth (In.)	Water Content (In.)	Water Content (In.)	1960	1959	
<u>LOWER YELLOWSTONE - SHELL CREEK</u>								
Bald Mountain $\frac{1}{2}$	7E21	9600	2/23	56	14.8	17.6	20.8	16.2**
Beaver Tongue $\frac{1}{2}$	7E20	9200	2/23	52	13.0	16.3	19.8	15.9**
Bone Spring $\frac{1}{2}$	7E18	9200	2/27	44	12.0E	13.0E	16.4	13.9**
Granite Creek Camp	7E22	7800	2/25	6	1.9	N.R.	6.4	4.5**
Granite Pass $\frac{1}{2}$	7E17	8950	2/25	44	12.0	13.2	15.3	13.0**
Ranger Creek	7E4	8800	2/25	25	4.8	N.R.	9.7	7.4**
Shell Creek	7E23	9600	2/27	39	10.0E	12.5E	13.1	4
<u>LOWER YELLOWSTONE - PORCUPINE CREEK</u>								
Five Springs Falls	7E31	7500	3/1	16	3.8	5.4	10.8	5.7**
Medicine Wheel $\frac{1}{2}$	7E30	9000	2/24	45	11.6	15.2	19.0	13.5**
<u>LOWER YELLOWSTONE - TONGUE RIVER</u>								
Beaver Tongue $\frac{1}{2}$	7E20	9200	2/23	52	13.0	16.3	19.8	15.9**
Big Goose #2	7E32	7700	2/27	28	6.5	6.6	7.2	6.0**
Bone Spring $\frac{1}{2}$	7E18	9200	2/27	44	12.0E	13.0E	16.4	13.9**
Burgess R.S. #2	7E33	7900	2/24	26	5.3	7.6	8.7	6.3**
Dome Lake #2	7E34	8800	2/27	35	8.0E	7.5E	8.6	7.5**
Geneva Pass	7E37	10600	2/27	44	12.0E			
Gloom Creek	7E14	9300	2/27	47	13.0E	13.0E	13.1	10.6**
Granite Pass $\frac{1}{2}$	7E17	8950	2/25	44	12.0	13.2	15.3	13.0**
Sibley Lake $\frac{1}{2}$	7E11	8000	2/25	35	8.2	9.2	11.7	8.3**
Steamboat Point	7E10	7500	2/25	25	5.7	7.6	9.0	6.1**
Sucker Creek	7E12	9000	2/27	41	11.0E	12.5E	12.8	9.9**
Wood Rock G.S.	7E13	8500	2/25	34	7.4	9.3	10.1	8.5**
<u>LOWER YELLOWSTONE - POWDER RIVER</u>								
Bear Trap $\frac{1}{2}$	7F1	8000	3/2	29	6.7	4.1		1
Canyon Creek $\frac{1}{2}$	7F2	7400	3/3	36	9.3	8.7		1
Cloud's Peak	7E36	10000	2/27	39	10.0E	7.5E		1
Muddy Creek G.S. $\frac{1}{2}$	7E28	7800	2/28	19	3.9	3.4	5.0	4
Munkres Pass $\frac{1}{2}$	7E8	9700	3/1	26	5.5	6.8	7.2	7.5**
Onion Gulch $\frac{1}{2}$	7E27	8100	3/2	27	5.2	5.2	9.5	4
Soldier Park	7E5	8700	3/1	15	3.8	4.3	5.5	4.1**
Sour Dough	7E6	8500	2/28	24	5.3	4.1	6.3	4
<u>NORTH PLATTE - SWEETWATER</u>								
Dutch Joe R.S.	9G5	8700	2/27	26	5.4	5.7	6.5	8.1**
Grannier Meadows #1 $\frac{1}{2}$	8G4	9000	2/20	27	5.4	8.3	6.6	13.1
Larsen	9G6	9000	3/1	27	6.2	5.5	8.5	10.1**
South Pass $\frac{1}{2}$	8G3	9000	2/20	26	5.7	7.1	8.4	13.2



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<u>NORTH PLATTE - LARAMIE RIVER</u>									
Albany $\frac{1}{2}$	6H11	9400	2/27	14	13.0E	8.5E	13.4	12.3**	12
Brooklyn Lake #1 $\frac{1}{2}$	6H1	10200	2/25	44	12.9	14.5	20.3	19.5	24
Brooklyn Lake #2 $\frac{1}{2}$	6H13	10200	2/25	43	12.1	14.1	20.2	19.8**	5
Cameron Pass <sup>c</sup> $\frac{1}{2}$	5J1	10300	2/26	63	14.8E	18.0E	19.8	18.0	24
Chambers Lake <sup>c</sup> $\frac{1}{2}$	5J2	9000	2/26	19	4.1	7.0	11.7	7.0	24
Deadman Hill <sup>c</sup> $\frac{1}{2}$	5J6	10200	3/1	48	8.1E	14.0E	14.0	12.2	24
Evans $\frac{1}{2}$	6H15	9000	2/24	28	6.1	5.7			1
Foxpark $\frac{1}{2}$	6H12	9200	2/27	20	3.9	4.5	5.6	6.0	24
Hairpin Turn #2	6H2	9500	2/25	24	6.5	5.7	10.8	10.2	23
LaBonte $\frac{1}{2}$	5G2	8450	2/26	21	4.2	3.0	4.4	5.2**	12
Libby Lodge #2	6H3	8700	2/25	26	6.8	4.6	10.0	9.2	23
Lost Lake <sup>c</sup> $\frac{1}{2}$	5J23	9300	2/26	27	5.8	8.1	14.2	11.1	9
Pole Mountain #2 $\frac{1}{2}$	5H1	8700	2/27	15	2.8	2.5	3.6	4.4	25
Roach <sup>c</sup>	6J12	9800	2/27	39	9.0E	14.8E	16.0	15.7	19
Rock Creek $\frac{1}{2}$	6H14	9800	2/27	40	12.0E	16.5E	N.R.		1
<u>NORTH PLATTE - CROW CREEK</u>									
Pole Mountain #2 $\frac{1}{2}$	5H1	8700	2/27	15	2.8	2.5	3.6	4.4	25
<u>NORTH PLATTE - ABOVE SEMINOE RESERVOIR</u>									
Albany $\frac{1}{2}$	6H11	9400	2/27	14	13.0E	8.5E	13.4	12.3**	12
Bottle Creek	6H8	8200	2/24	27	9.1	7.6	11.3	12.2	23
Boxelder #1 $\frac{1}{2}$	5G1	9000	2/27	19	1.0	6.6	5.2	4.9**	11
Boxelder #2 $\frac{1}{2}$		9000	2/27	20	4.2				
Cameron Pass <sup>c</sup> $\frac{1}{2}$	5J1	10300	2/26	63	14.8E	18.0E	19.8	18.0	24
Casper Mountain $\frac{1}{2}$	6G1	8700	3/1	12	10.0	11.4	8.2	9.3**	5
Columbine <sup>c</sup> $\frac{1}{2}$	6J3	9300	2/24	49	12.2	16.4	22.2	19.6	25
Elk Mountain	6H13	10000	No Report			4.5E	N.R.		1
Elk River	6J4	8700	2/27	40	9.6E	12.4	18.0	15.1	25
Evans $\frac{1}{2}$	6H15	9000	2/24	28	6.1	5.7	N.R.		1
Foxpark $\frac{1}{2}$	6H12	9200	2/27	20	3.9	4.5	5.6	6.0	24
LaBonte $\frac{1}{2}$	5G2	8450	2/26	21	4.2	3.0	4.4	5.2**	12
North Barrett Creek	6H5	9400	2/27	59	16.0E	11.0E	N.R.	14.6	24
North French Creek	6H4	10200	2/27	66	18.0E	18.5E	N.R.	23.0	22
Northgate <sup>c</sup>	6J7	8500	2/24	19	3.3	4.5	5.2	5.4**	11
Old Battle $\frac{1}{2}$	6H10	9800	2/24	57	19.7	20.5E	20.2	25.8	24
Park View <sup>c</sup>	6J2	9200	2/25	24	4.6	7.5	6.6	7.7	25
Rock Creek $\frac{1}{2}$	6H14	9800	2/27	40	12.0E	16.5E	N.R.		1
Ryan Park	6H6	8400	2/27	33	9.0E	5.5E	N.R.	8.7	23
Webber Spring	6H9	9000	2/24	33	9.0	10.1	12.5	15.5	23
Willow Creek Pass <sup>c</sup>	6J5	9500	2/25	30	6.3	10.0	10.1	10.8	23



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NORTH LARAMIE MOUNTAINS

Boxelder #1	5G1	9000	2/27	19	4.0	6.6	5.2	4.9** 11
Boxelder #2		9000	2/27	20	4.2	3.4		1
Casper Mountain	6G1	8700	3/1	42	10.0	11.4	8.2	9.3** 5
LaBonte	5G2	8150	2/26	21	4.2	3.0	4.4	5.2** 12

UPPER COLORADO - GREEN RIVER

Big Park	10G11	8700	2/27	39	10.0E	N.R.	15.5	18.2** 8
Big Sandy Opening	9G9	9200	2/27	32	6.6			
Blind Bull Summit	10G2	8750	2/27	60	17.0E	N.R.	22.0	28.4** 8
Dutch Joe R.S.	9G5	8700	2/27	26	5.4	5.7	6.5	8.1** 9
East Rim Divide	10F17	7950	2/23	21	4.0	4.7	10.4	10.5 21
Elk Heart Park G.S.	9G8	9300	2/24	37	7.3			
Grannier Meadows	8G4	9000	2/20	27	5.4	8.3	6.6	13.1 24
Gros Ventre	10F19	8750	2/27	34	8.0E	14.0E	11.9	11.0** 13
Kendall R. S. #1	10F15	7900	2/23	22	4.7	5.2	8.9	10.5 20
Kendall R. S. #2		7900	2/23	28	6.4			
Loomis Park #1	10F16	8500	2/24	34	7.9	9.1	16.0	15.9 20
Loomis Park #2		8500	2/24	35	8.2			
Mulligan Park	9G1	8900	2/24	26	5.2	5.2	9.8	9.6 18
Old Battle	6H10	9800	2/24	57	19.7	20.5E	20.2	25.8 24
Piney LaBarge #1	10G10	8820	3/3	39	10.6	11.1	14.6	16.9** 6
Piney LaBarge #2		8820	3/3	48	13.0			
Poison Meadows	10G6	8500	2/27	59	17.0E	N.R.	22.3	25.6** 12
Snyder Basin #2	10G13	80L0	3/3	35	8.5	8.7	12.4	13.9** 5
Soda Lake	10G14	8300	3/2	12	9.9	9.6	15.5	17.0** 4
South Pass	8G3	9000	2/20	26	5.7	7.1	8.4	13.2 21
Triple Peaks	10G15	8600	3/2	56	15.6	14.0	23.1	4

SNAKE RIVER - ABOVE JACKSON LAKE

Arizona	10F1	6850	2/26	47	12.8	10.8	14.7	17.4e 12
Astor Creek	10E8	7700	2/25	71	19.7	14.6	24.1	30.3e 10
Base Camp	10F2	6900	2/27	44	11.5	10.5	15.3	17.9e 12
Coulter Creek	10E10	7600	2/24	53	15.5	12.8	18.7	21.8e 10
Glade Creek	10E13	7200	2/25	51	13.9	12.0	17.1	20.8e 10
Grassy Lake	10E15	7265	2/25	75	23.3	20.1	28.7	30.6e 21
Huckleberry Divide	10E14	7300	2/26	46	12.7	10.9	15.6	18.1e 10
Lewis Lake Divide	10E9	7900	2/25	89	27.6	21.1	36.4	40.0e 10
Moran	10F4	6800	2/26	33	7.9	9.5	11.3	11.2e 10
Moran Bay	10F3	6800	2/26	49	13.6	13.3	18.6	19.7e 10
Snake River Station	10E12	6780	2/25	53	15.1	11.7	16.8	19.0e 10
Thumb Divide	10E7	7900	2/25	54	13.5	10.3	16.7	21.2e 10



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<u>JACKSON LAKE TO PALISADES</u>									
Afton R.S.	10G4	6200	2/23	9	2.5	6.2	4.2	4.6	25
Base Camp	10F2	6900	2/27	14	11.5	10.5	15.3	17.9e	12
Blackrock	10F7	8600	2/27	52	13.3	13.4	19.9	19.2**	11
Blind Bull Summit $\div$	10G2	8750	2/27	60	17.0E	N.R.	22.0	28.4**	9
Bryan Flat	10F14	6250	2/23	23	5.3	4.4	8.3	9.4	25
CCC Camp $\div$	10G7	7500	2/23	29	6.5	9.3	9.3	10.4	25
Cottonwood Lake	10G5	7500	2/27	48	12.0E	N.R.	19.0		4
Deadman Ranch	10G1	6534	2/27	26	7.0E	N.R.	10.5	10.2*	22
East Rim Divide $\div$	10F17	7950	2/23	21	4.0	4.7	10.4	10.5	21
Four Mile Meadows	10F6	7770	2/27	40	10.0	7.8	12.4	11.5**	11
Greys Boundary	10F18	5800	2/23	26	6.9	9.1	11.0	10.6	25
Gros Ventre $\div$	10F19	8750	2/27	34	8.0E	14.0E	11.9	11.0**	13
Grover Park Divide	10G3	7500	2/24	30	7.5	10.5	9.3	10.0	25
Loomis Park #1 $\div$	10F16	8500	2/24	34	7.9	9.1	16.0	15.9	20
Poison Meadows $\div$	10G6	8500	2/27	59	17.0E	N.R.	22.3	25.6**	12
Salt River Summit $\div$	10G8	7900	2/23	38	8.7	10.1	11.6	13.6**	13
Snow King Mtn. #3	10F20	7600	3/1	38	9.3	9.3	13.7		2
Teton Pass #2 $\div$	10F13	8500	2/28	70	20.0	20.6	29.4	31.5*	15
Togwotee Pass $\div$	10F9	9600	2/27	67	19.0	19.1	26.8	25.7**	11
Turpin Meadows	10F5	6930	2/27	31	7.1	5.6	10.1	10.0**	11
Yellowjacket	10F10	7675		No Report		4.0	6.7	5.5*	21

BEAR RIVER

Big Park $\div$	10G11	8700	2/27	39	10.0E	N.R.	15.5	18.2**	8
CCC Camp $\div$	10G7	7500	2/23	29	6.5	9.3	9.3	10.4	25
Piney LaBarge #1	10G10	8820	3/3	39	10.6	11.1	14.6	16.9**	6
Monte Cristo R.S. <sup>u</sup>	11H12	8960	2/23	17	12.6	15.5	17.5	22.7**	11
Poison Meadows $\div$	10G6	8500	2/27	59	17.0E	N.R.	22.3	25.6**	12
Salt River Summit $\div$	10G8	7900	2/23	38	8.7	10.1	11.6	13.6**	13
Trial Lake <sup>u</sup> $\div$	10J8	9800	2/27	49	11.5	16.8	17.8	23.4**	15

MISSOURI - CHEYENNE RIVER

Upper Spearfish <sup>s</sup>	3E1	6500	2/28	19	4.3	7.1	7.2	5.4*	17
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Averages are for the 15 year base period of 1943 to 1957.

\* Average is for 15 years of data within and adjacent to the 1943-57 period.

\*\* Average of all past data.

<sup>s</sup> South Dakota snow courses.

<sup>u</sup> Utah snow courses.

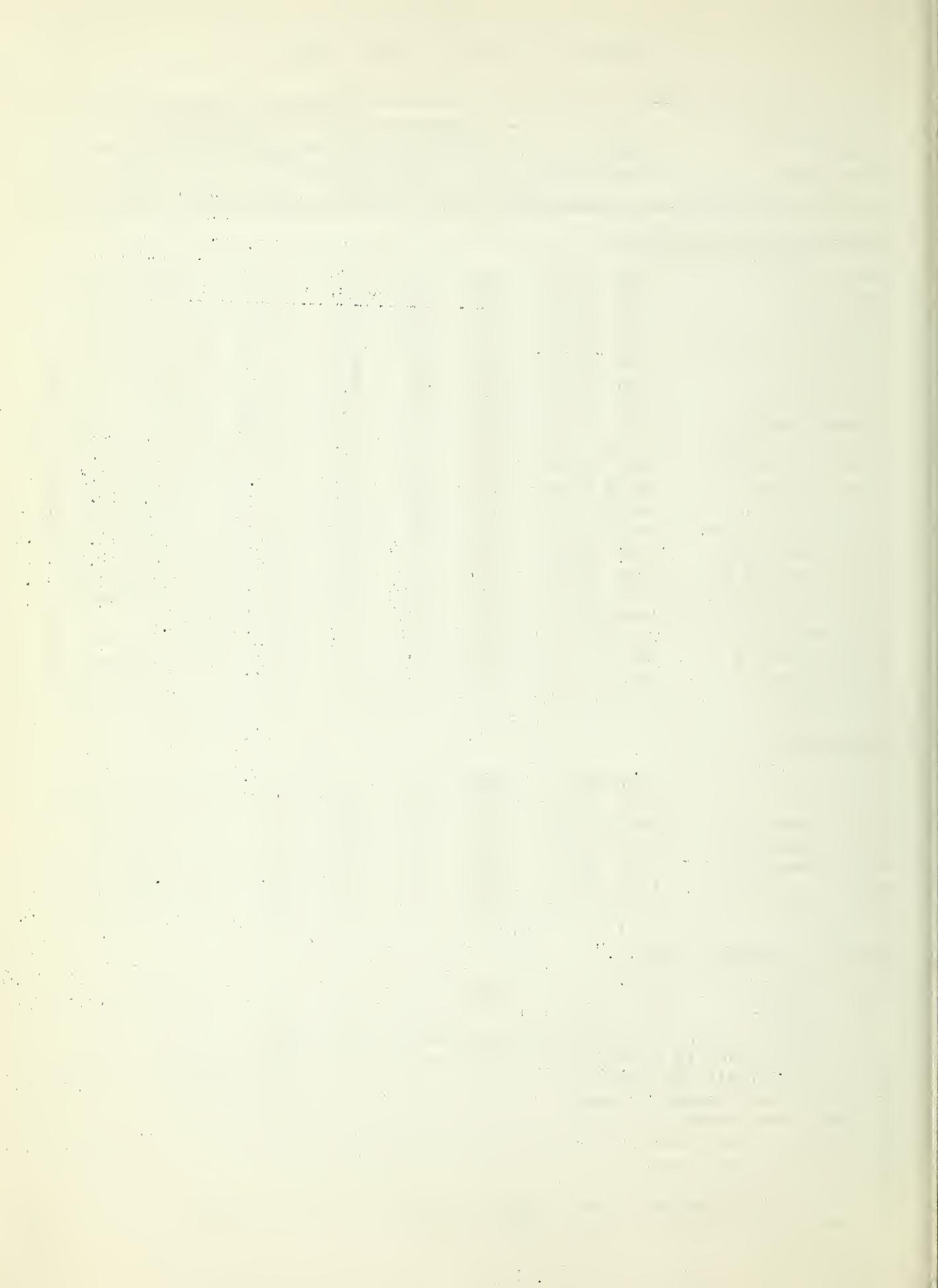
<sup>c</sup> Colorado snow courses.

<sup>m</sup> Montana snow courses.

$\div$  Located close to divide.

E Aerial stadia marker. Water content estimated from snow depth.

e Partial estimate within the 1943-57 period.



## STATUS OF WYOMING AND SOUTH DAKOTA RESERVOIR STORAGE - MARCH 1, 1961

Basin and/or Stream	Reservoir	Usable Capacity 1000s AF	Usable Storage - 1000 Acre Feet			15-Yr. Avg. 1943-1957
			1961	1960	1959	
Snake River	Jackson	847.0	242.0	477.0	481.0	465.5
Snake River	Palisade	1202.0	N.R.	499.3	895.0	
North Platte	Seminoe	981.8	76.4	267.7	701.2	408.8
North Platte	Pathfinder	1011.0	244.8	209.9	144.5	505.2
North Platte	Alcova**	30.3	5.3	28.3	-36.6	3.2
North Platte	Guernsey	39.8	17.8	12.4	33.1	36.8
North Platte	Sutherland	70.0	N.R.	N.R.	40.9	
North Platte	Kingsley	1900.0	N.R.	N.R.	1450.0	
North Platte	Minatare	60.8	8.3	23.9	31.4	21.1
North Platte	Glendo	786.3	272.4	375.3		
Kansas Basin	Bonny	39.9	39.7	39.9		
Kansas Basin	Swanson Lake	116.1	94.0	90.6	N.R.	
Kansas Basin	Enders	36.0	43.6	37.2	N.R.	
Kansas Basin	Harry Strunk	33.9	34.7	35.8	N.R.	
Kansas Basin	Harlan County	252.9	339.7	317.1	N.R.	
Kansas Basin	Cedar Bluff	176.8	185.1	175.7	N.R.	
Laramie River	Wheatland	95.0	12.9	26.2	30.0	23.0
Belle Fourche	Belle Fourche	185.2	29.3	34.3	39.3	106.8
Belle Fourche	Keyhole	190.3	3.8	0.0	0.0	10.9
Shoshone River	Buffalo Bill	380.3***	129.6	122.5	0.0	235.4
Wind River	Boysen	560.0	98.1	140.5	78.2	448.6*
Wind River	Pilot Butte	31.6	13.5	15.9	9.7	13.3
Wind River	Bull Lake	152.0	57.9	37.8	49.0	63.2
Cheyenne River	Angostura	92.0	N.R.	19.2	44.1	41.4
Cheyenne River	Deerfield	15.1	N.R.	1.2	8.9	12.9
Grand River	Shadehill	84.0	N.R.	69.7	71.2	76.4
Green River	Big Sandy	38.3	4.3	N.R.	N.R.	

\* Average is for less than 15 years of record in the 1943-57 period.

\*\* Alcova, downstream from Seminoe and Pathfinder and containing 160,170 Acre Feet of active storage that is unavailable to the Kendrick Project.

\*\*\* Usable capacity 439,800 however, 59,500 Acre Feet are inactive except in emergency.



## THE MECHANICS OF SNOW MELT RUNOFF

The water users throughout the state have asked the Soil and Water Conservation Service to provide a series of articles explaining the relationship of the water content of the snow, mountain soil moisture, snow pack evaporation and the influence that these factors have on snow melt runoff.

The water content of the snow was chosen to be first in this series since it is, by far, the most important factor in estimating the ensuing April 1 to September 30 yield from our watersheds. This article was, inadvertently, left out of the February 1, 1961 bulletin.

The brochure included with this report contains an explanation, with illustrations, of the tools and methods that the snow surveyors use to obtain the water content of the snow pack. These snow courses contain ten wind protected stations. The average of these ten measurements is the number of inches of water on this snow course, and literally means that a lake of water, so many inches deep, is stored in the watershed "reservoir".

The snow surveys are made as closely as possible to the first of the month, each year, in order to obtain comparable data and, therefore, maintain maximum accuracy. Early, or late snow, in this snow pack, has no difference in value as far as runoff is concerned. The watershed "reservoir" may release its storage suddenly, or in small rivulets. The manner in which the storage is released is completely dependent on mountain temperatures. When minimum daily temperatures rise above 32 degrees, the peak of the runoff is on.

High elevation snow courses may sometimes be far above normal, while winter precipitation on the low elevation snow courses may be considerably below normal. At times the reverse may be true. The bulk of the runoff comes from the high snow packs. Valley or foothill precipitation data is not an accurate index of the ensuing high elevation snow melt runoff.



## THE MECHANICS OF SNOW MELT RUNOFF

In the February 1 report, technicians of the Soil and Water Conservation Service discussed the water content of the high elevation snow pack. The second article in this series will be an explanation of the mechanics of mountain soil moisture and snow melt.

Prior to the snow melt season, the percent of moisture in the soils under the snow pack is almost always less than field capacity. From year to year this deficit may vary by several inches. Since the first duty of snow melt is to bring the soil to field capacity, the number of inches of water required by the soil, is subtracted from the number of inches of water in the snow pack. The balance will become snow melt runoff.

Valley and foothill precipitation data, during the winter, is not an accurate index of the mountain snow pack. Determining mountain soil moisture from early, low elevation precipitation data is also a rough estimate, particularly when snow melt sometimes occurs during the early part of the winter. Soil and Water Conservation Service technicians are solving this problem by placing soil moisture electrode stacks adjacent to the high elevation snow courses. Accurate soil moisture data is then obtained at the critical time of the year--during the snow survey season.



# Agencies Cooperating in Wyoming Snow Surveys

## FEDERAL

U. S. Department of Agriculture  
Forest Service  
Soil Conservation Service

U. S. Department of Commerce  
Weather Bureau

U. S. Department of Interior  
Bureau of Reclamation  
Geological Survey  
National Park Service

## STATE

State Engineer of Wyoming

## PRIVATE

Wheatland Irrigation District  
Greybull Valley Irrigation District  
Clouds Peak Soil & Water Conservation District  
Cody Soil & Water Conservation District  
Dubois-Crowheart Soil & Water Conservation District  
Greybull Valley Soil & Water Conservation District  
Lake DeSmet Soil & Water Conservation District  
Laramie Rivers Soil & Water Conservation District  
Little Snake River Soil & Water Conservation District  
Medicine Bow Soil & Water Conservation District  
Pinedale Soil & Water Conservation District  
S & E Soil & Water Conservation District  
Shell Valley Soil & Water Conservation District  
Shoshone Soil & Water Conservation District  
Tongue River Soil & Water Conservation District  
Washakie Soil & Water Conservation District  
Wheatland Soil & Water Conservation District

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SOIL CONSERVATION SERVICE  
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